

It is expected that a Quorum of the Personnel Committee, Administration Committee, and Common Council will be attending this meeting: (although it is not expected that any official action of any of those bodies will be taken)

CITY OF MENASHA
Board of Public Works
Third Floor Council Chambers, 140 Main Street, Menasha
January 21, 2008

6:15 PM

AGENDA

 [Back](#)  [Print](#)

1. CALL TO ORDER

A. -

2. ROLL CALL/EXCUSED ABSENCES

A. -

3. MINUTES TO APPROVE-MINUTES & COMMUNICATIONS TO RECEIVE

A. January 7, 2008

4. DISCUSSION

- | | |
|---|---|
| A. Street Use Application - Memorial Day Parade; Monday, May 26, 2008; 8:00 AM to 10:30 AM; American Legion 152 | <input type="checkbox"/>
Attachments |
| B. Change Order - National Power Rodding Corporation; Contract Unit No. E145-07-01B, Sanitary Sewer Rehabilitation; 39-Day Time Extension to June 30, 2008 Due to Weather Conditions (Change Order No. CO-1450701B-01) | <input type="checkbox"/>
Attachments |
| C. Change Order - Infrastructure Technologies, Inc.; Contract Unit No. E145-07-01D, Sanitary Manhole Lining; DEDUCT: \$5,760.00 (Change Order No. CO-1450701D-01) | <input type="checkbox"/>
Attachments |
| D. Payment - Infrastructure Technologies, Inc.; Contract Unit No. E145-07-01D, Sanitary Manhole Lining; \$32,983.37 (Payment No. 1) | <input type="checkbox"/>
Attachments |
| E. Preliminary Resolution Declaring Intent to Exercise Special Assessment Powers under Section 66.07, Wisconsin Statutes - Final Asphalt Pavement/Curb & Gutter in Lake Park Heights Subdivision, Northridge Manor II Subdivision and Walker Subdivision | <input type="checkbox"/>
Attachments |
| F. Status Report on Phase III SSES and Sanitary Sewer Improvements | <input type="checkbox"/>
Attachments |
| G. Status Report on Snow and Ice Control Budget | <input type="checkbox"/>
Attachments |
| H. Recommendation to Reconstruct First Street from Manitowoc Street to Ice Street (2008 Budget) | <input type="checkbox"/>
Attachments |

5. ADJOURNMENT

A. -

"Menasha is committed to its diverse population. Our Non-English speaking population and those with disabilities are invited to contact the Menasha City Clerk at 967-3603 24-hours in advance of the meeting for the City to arrange special accommodations."

**STREET USE APPLICATION**

Sponsored by: American Legion 152
Responsible Person: Michael E Taylor
Address: 545 Broad Street
Menasha, WI. 54952
Phone: 920 725-5380

Street Use Date: 5/26/08
Start Time: 8:00 a.m. Lineup
End Time: 10:30
Number of Units: 100

Street Route: (Attach Map)
Description of Use

Start 2nd & Milwaukee To Main, West on
Main To Tayco, South on Tayco. Continue
on To Washington into the City of Neenah
on N. Commercial St.

LIABILITY INSURANCE HAS BEEN SECURED IN THE AMOUNT OF \$ 1,000,000 WITH
THE CITY OF MENASHA NAMED AS ADDITIONAL INSURED:

Insurance Company Colony National Policy No. AR6360147A
(Attached is a copy of the insurance certificate). Genesis Indemnity - ZXB300938E

NOTE TO EVENTS PLANNING TO USE CITY PARKS AND/OR GREENSPACE: Any multi-day event or event which plans to sell beer and/or wine to the public must appear before the Parks and Recreation Board.

DATE: 1-14-08 APPLICANT'S SIGNATURE: Michael E Taylor Vice Commander
American Legion Post #152

TO BE COMPLETED BY CITY STAFF

SCHEDULED PARK & RECREATION BOARD REVIEW DATE: _____

NOT REQUIRED: _____ APPROVED: _____ DENIED: _____

SCHEDULED COMMON COUNCIL REVIEW DATE: 1/21/08

APPROVED: _____ DENIED: _____

APPROVAL:

Police Dept. MB

Fire Dept. LLW

Public Works Dept. MR

City Attorney

JSB - see below

City sponsored event - City not needed
to be name an additional insurer.

PARADE ENDS →

↑ MAIN ST.

→ WISC. AVE

↑ NORTH COMMERCIAL

MEMORIAL DAY PARADE ROUTE

MAY 26th. 2008

NEENAH

Nicolet Blvd

SANFORD ST.

↑ WASHINGTON

MENASHA

8:00 AM
WATER
FRONT
SERVICE

WILL ST

↑ MAIN ST

TAYCO ST.

BROAD ST

FIRST ST

Second ST

↑ MAIN ST

PARADE START 9:00 AM

CHANGE ORDER NO. CO-1450701B-01 DATE December 13, 2007

KAEMPFER & ASSOCIATES, INC. PROJECT: WASTEWATER COLLECTION SYSTEM
Consulting Engineers REHABILITATION IMPROVEMENTS PHASE 3
Post Office Box 150 OWNER: CITY OF MENASHA
650 East Jackson Street 140 Main Street
Oconto Falls, WI 54154 Menasha, WI 54952

OWNER'S PROJECT NO.: _____ ENGINEER'S PROJECT NO.: E145-05.11

CONTRACTOR: NATIONAL POWER RODDING CORPORATION CONTRACT DATE: November 15, 2007
COMPLETION DATE: May 22, 2008
REVISED COMPLETION DATE: June 30, 2008

ADDRESS: 2500 W. Arthington Street
Chicago, Illinois 60612-4108

CONTRACT: E145-07-01B, Sanitary Sewer Rehabilitation

You are directed to make the changes noted below in the above contract and this Change Order becomes a part of your contract, subject to all the conditions thereof;

NATURE OF CHANGE: The Contractor is granted a 39-day time extension. Due to weather conditions, this time extension will allow them to perform their services within their contract time.

ADDITIONAL NUMBER OF CONTRACT DAYS PROVIDED BY THIS CHANGE ORDER: 39 DAYS

Enclosures: National Power Rodding Corp. letter dated December 6, 2007.

The changes result in the following adjustment of Contract Price:

Contract Price Prior to this Change Order	\$150,459.73
Net (Increase / Decrease) Resulting from this Change Order	\$ 0.00
Current Price, including this Change Order	\$150,459.73

The above changes are approved:

FOR THE ENGINEER:

By:

Taryn S. Nall
Taryn S. Nall, P.E.

Date:

1/2/08

FOR THE OWNER:

By:

Mark Radtke, P.E., Director of Public Works

Date:

The above changes are accepted:

FOR THE CONTRACTOR:

NATIONAL POWER RODDING CORPORATION

By:

Harold Kosova
Harold Kosova, President

Date:

12/18/07



NATIONAL POWER RODDING CORP.

Specializing in today's needs for environmental protection.

2500 W. Arthington Street • Chicago, IL 60612-4108 • (312) 666-7700 • Fax (312) 666-5810

December 6, 2007

Taryn S. Nall, P.E.
Kaempfer & Associates, Inc.
650 E. Jackson
P.O. Box 150
Oconto Falls, WI 54154

DEC 07 2007

KAEMPFER & ASSOCIATES

RE: City of Menasha
Wastewater Collection System Rehabilitation Improvements – Phase 3
Contract E145-07-01B – Sanitary Sewer Rehabilitation
NRPC Job #MEN102-1

Dear Mr. Nall:

We have reviewed the various services we need to perform within this contract. Due to the weather, we are requesting an extension of time to June 30, 2008.

Thank you for your consideration.

Sincerely,

Harold Kosova
President

CHANGE ORDER NO. CO-1450701D-01 DATE December 17, 2007

KAEMPFER & ASSOCIATES, INC. PROJECT: WASTEWATER COLLECTION SYSTEM
 Consulting Engineers REHABILITATION IMPROVEMENTS PHASE 3
 Post Office Box 150 OWNER: CITY OF MENASHA
 650 East Jackson Street 140 Main Street
 Oconto Falls, WI 54154 Menasha, WI 54952

OWNER'S PROJECT NO.: _____ ENGINEER'S PROJECT NO.: E145-05.11

CONTRACTOR: INFRASTRUCTURE CONTRACT DATE: November 12, 2007
 TECHNOLOGIES, INC. COMPLETION DATE: November 30, 2008
 ADDRESS: 6268 Oak Run Road
 Rhinelander, Wisconsin 54501
 CONTRACT: E145-07-01D, Sanitary Manhole Lining

You are directed to make the changes noted below in the above contract and this Change Order becomes a part of your contract, subject to all the conditions thereof;

NATURE OF CHANGE: Change the type of manhole chimney seal to optimize use of chimney seals and pavement restoration for future planned street projects.

ADDITIONAL NUMBER OF CONTRACT DAYS PROVIDED BY THIS CHANGE ORDER: 0 DAYS
 Enclosures: Change Order Summary Table and Infrastructure Technologies, Inc. letter dated December 11, 2007.

The changes result in the following adjustment of Contract Price:

Contract Price Prior to this Change Order	<u>\$312,491.00</u>
Net (Increase /Decrease) Resulting from this Change Order	<u>(\$ 5,760.00)</u>
Current Price, including this Change Order	<u>\$306,731.57</u>

The above changes are approved:

FOR THE ENGINEER: By: Taryn S. Nall Date: 1/2/08
 Taryn S. Nall, P.E.

FOR THE OWNER: By: _____ Date: _____
 Mark Radtke, P.E., Director of Public Works

The above changes are accepted:

FOR THE CONTRACTOR: INFRASTRUCTURE TECHNOLOGIES, INC.

By: Matt Huston Date: 12-21-07
 Matt Huston, Project Manager

SUMMARY TABLE

Delete the following items:

Item No.	Description	Unit Price	Total Cost
Contract E145-07-01D - Sanitary Manhole Lining			
6D	26 each urethane chimney seal	\$210.00	\$5,460.00
7D	14 each butyl and urethane chimney seal	\$260.00	\$3,640.00
9D	30 each provide temporary concrete pavement restoration in place of permanent concrete restoration at manhole	\$50.00	\$1,500.00
	Total Deductions to CO-1450701D-01		\$10,600.00

Add the following items:

Item No.	Description	Unit Price	Total Cost
Contract E145-07-01D - Sanitary Manhole Lining			
5D	13 each internal/external manhole chimney seal	\$280.00	\$3,640.00
8D	24 each butyl chimney seal	\$50.00	\$1,200.00
	Total Additions to CO-1450701D-01		\$4,840.00
	Total Deductions		-\$10,600.00
	Total Additions		\$4,840.00
	Total Cost for CO-1450701D-01		-\$5,760.00

December 11, 2007

Infratech

Infrastructure Technologies, Inc.

21040 Commerce Boulevard

Rogers, MN 55374-9341

www.infratechcatalog.com

Phone 763/428-6488 • Fax 763/428-6489

Mr. Mark Radtke
Director of Public Works
City of Menasha
140 Main Street
Menash, WI 54952

Dear Mark:

Infratech is pleased to offer a discount with respect to manhole locations identified by the city as needing only temporary surface restoration. As we discussed at the pre-construction meeting, Infratech will place a three inch thick non-reinforced pavement patch in lieu of our standard nine inch thick reinforced permanent patch at those locations. The temporary surfaces will be poured either with our standard nine bag surface mix or with left over seven bag wall mix when available. Although some cracking may occur, we feel the temporary surface should provide a couple years of service life.

Our per location discount is itemized including labor and material as follows:

- | | |
|--|---------|
| 1) Deduct .30 cu/yds concrete @ \$98.00/yd..... | \$29.40 |
| (includes fuel surcharge & heating charges) | |
| 2) Deduct 14 lineal feet #4 reinforcing rod @ \$0.28/lf..... | \$3.92 |
| 3) Deduct 5 minutes of labor @ \$200.00/hr..... | \$16.67 |
| (time saved not pouring/placing .30cu/yds above, finishing time is the same) | |
| Total..... | \$50.00 |

Mark, please call me if you have any questions or concerns.

Respectfully,



Matt Huston
Infrastructure Technologies, Inc.
(888) 289-1163 Rhinelander (Toll Free)

CC: Taryn Nall, Kaempfer & Associates

MONTHLY STATEMENT OF UNIT PRICE CONTRACT AMOUNT

Request for: Partial Payment No. PR-1450701D-01 Date: January 14, 2008
(Partial/Final)

Project: Wastewater Collection System Rehabilitation Improvements, Phase 3

Owner: City of Menasha

Contractor: Infrastructure Technologies, Inc. E145-05.11

Original Contract Amount as Bid:	<u>\$312,491.00</u>
*(ADD)(DEDUCT) by Revised Quantities:	<u>\$0.00</u>
*Amount Added by Change Order:	<u>\$0.00</u>
*Amount Deducted by Change Order:	<u>\$0.00</u>
TOTAL CONTRACT THIS DATE:	<u>\$312,491.00</u>
Value of Work Completed to Date:	<u>\$34,719.34</u>
Less <u>5</u> Per Cent Retainable:	<u>(\$1,735.97)</u>
Net Total:	<u>\$32,983.37</u>

Project on Schedule: YES NO 11 % Complete

Record of Previous Payments:

1	<u> </u>	6	<u> </u>	11	<u> </u>
2	<u> </u>	7	<u> </u>	12	<u> </u>
3	<u> </u>	8	<u> </u>	13	<u> </u>
4	<u> </u>	9	<u> </u>	14	<u> </u>
5	<u> </u>	10	<u> </u>	15	<u> </u>

Amount Previously Paid:	<u>\$0.00</u>
AMOUNT DUE THIS REQUEST:	<u>\$32,983.37</u>

This is to certify that, in accordance with the terms of the Contract, the Contractor is entitled to a payment in the amount requested.

Engineer's Approval for Payment

BY: Taryn S. Nall
Taryn S. Nall, P.E.
KAEMPFER & ASSOCIATES, INC.

Owner's Approval for Payment

BY: Mark Radtke
Mark Radtke, P.E., Dir. of Public Works
CITY OF MENASHA

* See Unit Price Contract Spreadsheet

Unit Price Contract												
PROJECT: Wastewater Collection System Rehabilitation Improvements Phase 3												
OWNER: City of Menasha												
CONTRACTOR: Infrastructure Technologies, Inc.												
ITEM NO.	DESCRIPTION	UNITS	UNIT PRICE	BID QTY.	BID TOTAL	PREVIOUSLY REQUESTED		CURRENT REQUEST		REVISED * QUANTITY	TOTAL	ADD (+) DEDUCT (-)
						QTY.	TOTAL	QTY.	TOTAL			
1D	Manhole concrete lining	VF	\$226.00	972	\$219,672.00	0.00	\$0.00	101.59	\$22,959.34	101.59	\$22,959.34	-\$196,712.66
2D	Sanitary sewer pipe connection	EA	\$75.00	268	\$20,100.00	0	\$0.00	28	\$2,100.00	28	\$2,100.00	-\$18,000.00
3D	Manhole flow channel construction to springline	EA	\$367.00	72	\$26,424.00	0	\$0.00	25	\$9,175.00	25	\$9,175.00	-\$17,249.00
4D	Manhole flow channel construction to 1-inch above crown of pipe	EA	\$580.00	39	\$22,620.00	0	\$0.00	1	\$580.00	1	\$580.00	-\$22,040.00
5D	Internal/external manhole chimney seal	EA	\$280.00	31	\$8,680.00	0	\$0.00	1	\$280.00	1	\$280.00	-\$8,400.00
6D	Urethane chimney seal	EA	\$210.00	31	\$6,510.00	0	\$0.00	0	\$0.00	0	\$0.00	-\$6,510.00
7D	Butyl and urethane chimney seal	EA	\$260.00	31	\$8,060.00	0	\$0.00	0	\$0.00	0	\$0.00	-\$8,060.00
8D	Butyl chimney seal	EA	\$50.00	18	\$900.00	0	\$0.00	2	\$100.00	2	\$100.00	-\$800.00
	Alternative bid item 1D for lining Manhole 614	EA	-\$475.00	1	-\$475.00	0	\$0.00	1	-\$475.00	1	-\$475.00	\$0.00
TOTAL, PART D ITEMS 1D THROUGH 8D						\$312,491.00		\$0.00			\$34,719.34	-\$277,771.66

K:\E14505\11\PRINT\TECHPR41

RESOLUTION R-1-08

A PRELIMINARY RESOLUTION DECLARING INTENT TO EXERCISE SPECIAL ASSESSMENT POWERS UNDER SECTION 66.0703, WISCONSIN STATUTES

Introduced by Alderman

RESOLVED, by the Common Council of the City of Menasha, Wisconsin:

1. The Common Council hereby declares its intention to exercise its powers under Section 66.0703, Wisconsin Statutes, to levy special assessments upon property within the following described area for benefits conferred upon such property by improvement of the following:

A. Improvements

1. Concrete Curb & Gutter Construction
2. 4" Asphaltic Concrete Pavement Construction
3. Various Associated Items

B. Location of Improvements

1. Lake Park Heights Subdivision
2. Northridge Manor II Subdivision
3. Walker Subdivision

2. The total amount assessed against such improvements shall not exceed the total cost of the improvements. The Common Council determines that such improvements shall be made under the police power, and the amount assessed against each parcel shall be on a cost per front foot, area, or unit cost basis.

3. That the assessment against any parcel shall be paid in accordance with Section 3-2-14 of the Menasha Municipal Code.

4. The Board of Public Works is directed to compile a report consisting of:

- A. Plans and Specifications of said improvements
- B. A summary of the allotted cost of the said improvements
- C. A schedule of proposed assessments showing the properties which are benefited by the improvement

Upon completing such report, the Board of Public Works is directed to file a copy thereof in the City Clerk's Office for public inspection.

5. Upon receiving the report of the Board of Public Works, the City Clerk is directed to give notice of a public hearing on such report as specified in Section 66.0703(7)(a), Wisconsin Statutes. The hearing shall be held in the Council Chambers at the City Hall at a time set by the City Clerk in accordance with Section 66.0703(7)(a), Wisconsin Statutes.

6. The notice and hearing requirements under paragraph 5 do not apply if they are waived, in writing, by all the owners of property affected by the special assessment, as specified in Section 66.0703(7)(b), Wisconsin Statutes.

Passed and approved this 21st day of January, 2008.

Joseph F. Laux, Mayor

Attest: _____
Deborah A. Galeazzi, City Clerk

Kaempfer & Associates, Inc.

Consulting Engineers

650 East Jackson St. P.O. Box 150
Oconto Falls, Wisconsin 54154
(920) 846-3932 Fax (920) 846-8319

DATE: January 15, 2008

E145-05.01

TO: Neenah-Menasha Sewerage Commission

FROM: Taryn S. Nall, P.E. *TSN*

PROJECT: City of Menasha Phase 3 SSES and Sewer Rehabilitation Program

RE: Status Report

Copies to: Mayor Joseph Laux and City Council
Mark Radtke, P.E., Director of Public Works

The City of Menasha started an extensive sewer system evaluation survey (SSES) and sewer rehabilitation program in 2002 to reduce infiltration and inflow (I/I) by correcting defects and structural deficiencies. Sources of I/I include manhole and sewer defects such as cracks, open joints, and fractured pipe; cracked sanitary lateral connections; and foundation drain cross-connections. The SSES and rehabilitation work is being performed throughout the entire collection system in four phases to make the program more manageable, prioritize drainage districts having the highest I/I, reduce manpower requirements, and spread out capital cost requirements. The drainage areas of the four phases are shown in Figure 1.

The SSES programs include a manhole inspection program, smoke testing program, sewer televising program, sanitary lateral televising program, and sump pump inspection program. The results of the survey work are evaluated and summarized in an SSES report. The SSES report identifies the sewer system defects that are cost-effective to correct, and identifies the structural defects that must be repaired or replaced.

The Phase 3 SSES included inspection of 461 manholes and sewer televising of 106,554 lineal feet of sanitary sewer ranging in size from 8 inches in diameter to 48 inches in diameter. The Phase 3 SSES included foundation drain/sump pump inspections and smoke testing of the southern portion of the Phase 3 study area that has primarily commercial development.

The Phase 3 SSES report was completed in January of 2007. The report summarized the results of the manhole inspection program, sewer televising program, and smoke testing program; and included a recommended improvements plan to reduce I/I into the sewer system and correct deficiencies of manholes and sewers in the sewer system. The Phase 3 rehabilitation program includes sewer defects in the Phase 2 SSES study area that have not been corrected. The Phase 2 rehabilitation program in 2005 identified sanitary sewers that could not be grouted due to significant structural defects. The sanitary sewer segments will be totally lined or spot lined with a cured-in-place lining (CIPP).

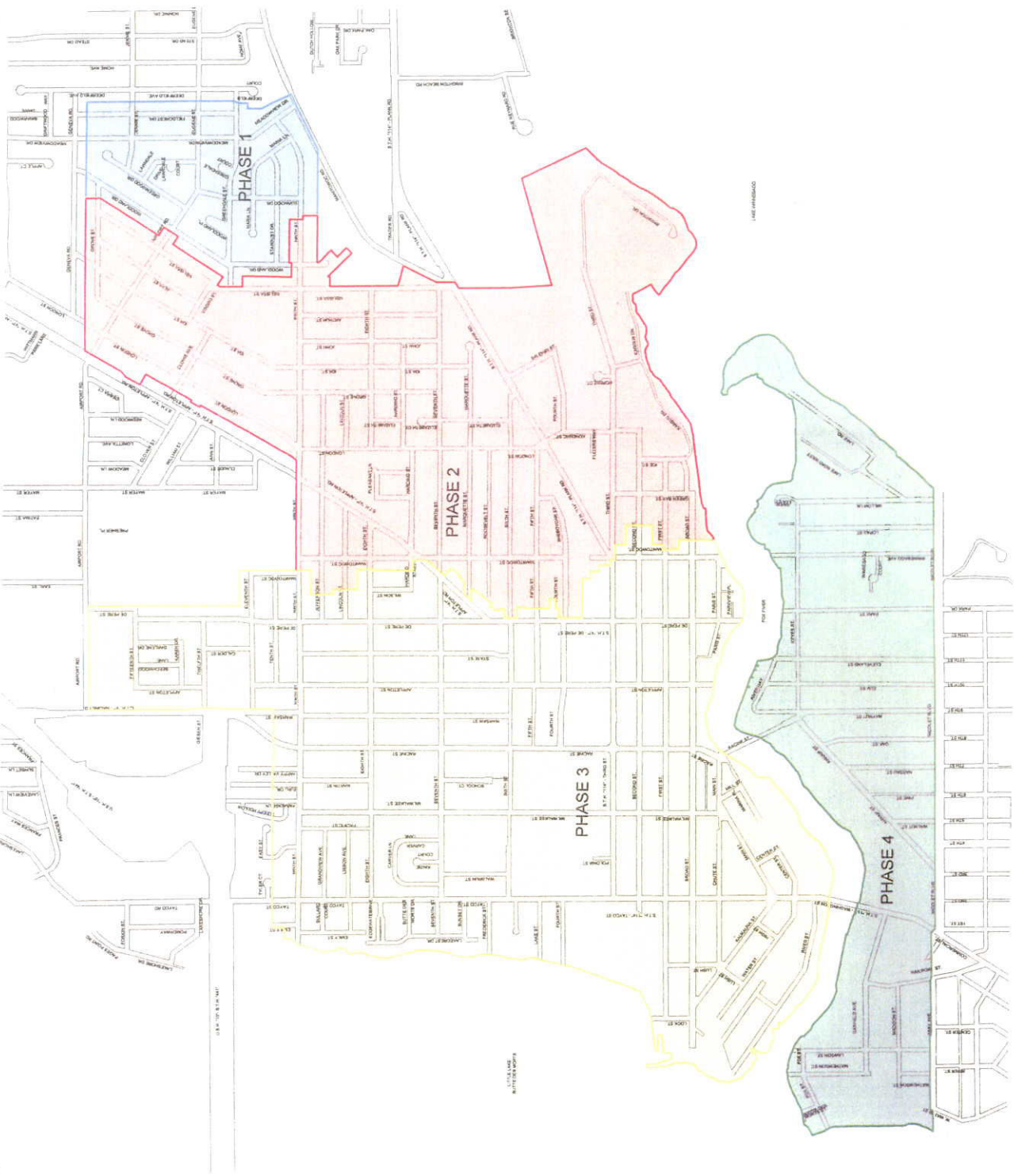


Fig. 1 Phases For Wastewater Collection System Improvements

The Phase 3 SSES report and construction plans and specifications for the Phase 3 Wastewater Collection System Rehabilitation Improvements were approved by the Wisconsin Department of Natural Resources (WDNR) on August 6, 2007. A summary of the Phase 3 Wastewater Collection System Rehabilitation Improvements is presented in Table 1.

Table 1 Summary of Phase 3 Wastewater Collection System Rehabilitation Improvements

Item	Work to be Completed
Sanitary Sewer CIPP Lining	
8-inch diameter sanitary sewer	15,529 lineal feet
10-inch diameter sanitary sewer	7,244 lineal feet
12-inch diameter sanitary sewer	13,816 lineal feet
15-inch diameter sanitary sewer	2,547 lineal feet
18-inch diameter sanitary sewer	7,643 lineal feet
21-inch diameter sanitary sewer	1,006 lineal feet
Pressure Inject Grouting Lateral Connections	256 lateral connections
Sanitary Sewer CIPP Spot Lining	
8-inch diameter sanitary sewer	83 lineal feet
10-inch diameter sanitary sewer	4 lineal feet
12-inch diameter sanitary sewer	41 lineal feet
27-inch diameter sanitary sewer	16 lineal feet
Pressure Testing and Grouting Sanitary Sewer Joints and Cracks	302 joints and cracks
Pressure Inject Grouting Manholes	20 manholes
Manhole Wall Repair	3 manholes
Invert Reconstruction	2 manholes
Sanitary Sewer Obstruction Removal	19 locations
8-inch Diameter Sanitary Sewer Replacement	2,107 lineal feet
Sanitary Manhole Replacement	3 manholes
Sanitary Manhole Concrete Lining	111 manholes

The Phase 3 Wastewater Collection System Rehabilitation Improvements project was bid on July 26, 2007. The four construction contracts were awarded on November 6, 2007. The total construction cost for the Phase 3 Wastewater Collection System Rehabilitation Improvements is estimated to be approximately \$2,258,000. The total project cost is estimated to be approximately \$2,733,400. The capital costs for the Phase 3 Wastewater Collection System Rehabilitation Improvements will be financed by a 20-year low interest loan from the Wisconsin Clean Water Fund (CWF). The user charge system was updated in September of 2006 to increase revenue to finance the project.

Construction of the Phase 3 Wastewater Collection System Rehabilitation Improvements project started in December of 2007. Construction is expected to be completed in December of 2008. The Phase 3 Wastewater Collection System Rehabilitation Improvements are anticipated to reduce I/I by approximately 350,000 gallons per day (gpd).

The Phase 2 SSES program included inspection of 1,530 sewered properties. Corrections of violations were completed at 253 properties. Twelve properties in the Phase 2 SSES study area are receiving sewer user surcharges for sewer use ordinance violations.

The Phase 3 SSES program includes a sump pump inspection program that will be completed in 2008. The sump pump inspection program is being performed in segments to make the program easier to manage and implement corrections. The locations of the five segments are shown in Figure 2. The Department of Public Works staff is performing the property inspections to identify illegal cross-connections to foundation drains or sump pump discharges to sanitary laterals. Inspections have been performed at 447 of the 449 sewered properties in Segment No. 1, 441 of the 446 sewered properties in Segment No. 2, 452 of the 455 sewered properties in Segment No. 3, and 214 of the 218 sewered properties in Segment No. 4a, that is approximately one-half of the Segment No. 4 area. Violations have been identified at 96 properties in Segment No. 1, 126 properties in Segment No. 2, 153 properties in Segment No. 3, and 24 properties in Segment No. 4a. Corrections have been completed at 91 properties in Segment No. 1, 119 properties in Segment No. 2, 145 properties in Segment No. 3, and 24 properties in Segment No. 4a. Thirty-one properties in the Phase 3 SSES study area are receiving sewer user surcharges for sewer use ordinance violations.

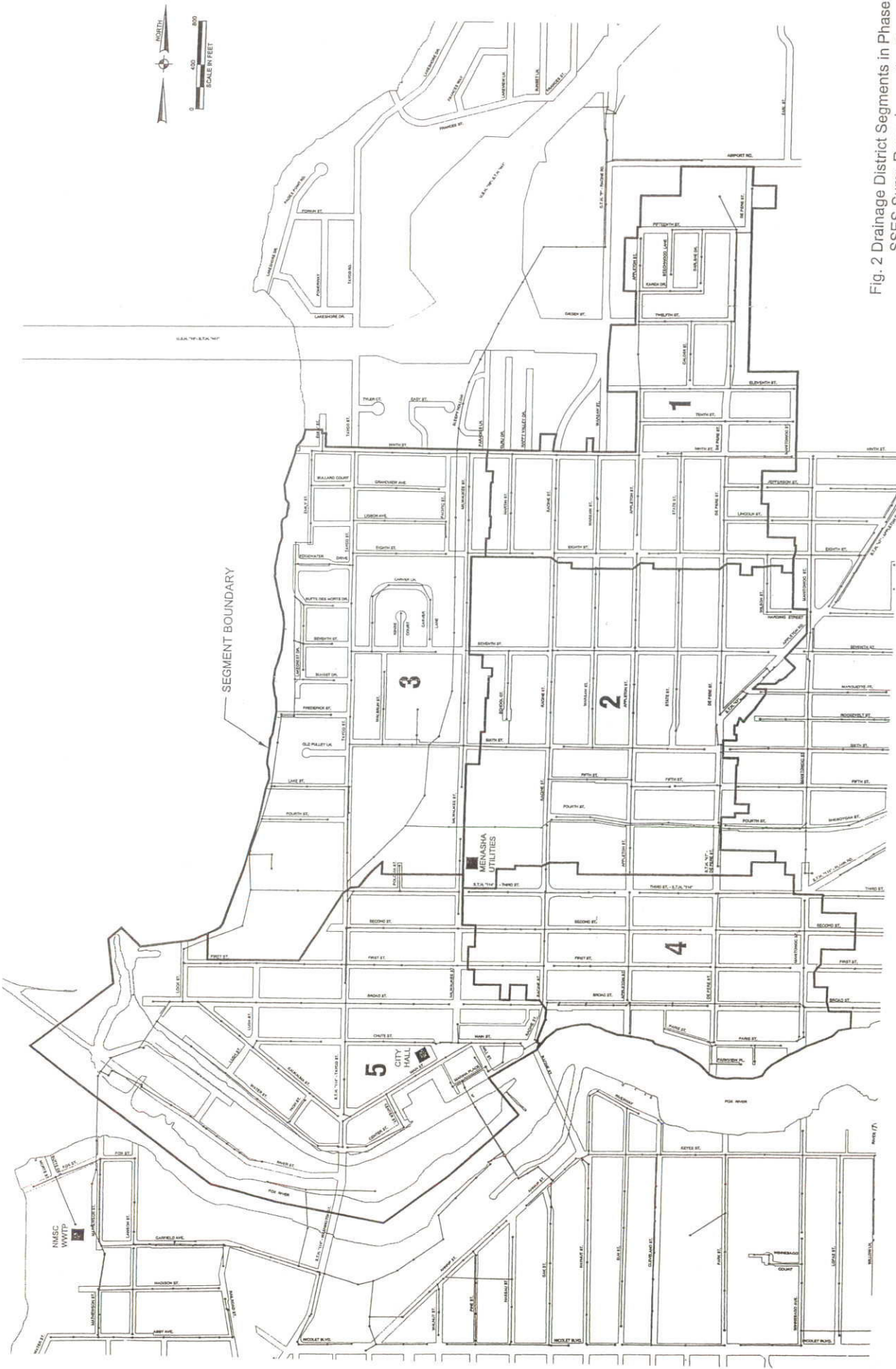


Fig. 2 Drainage District Segments in Phase 3
SSES Sump Pump Inspection Program



January 17, 2008

To: Mark Radtke

From: Tim Jacobson, Public Works Superintendent

Re: December 2007 Snow and Ice Control

As you have probably read or been informed December 2007 snow fall has been determined to be the fifth worst December in record history. The snow started falling on December 1st and by the 31st 22-23" had accumulated. That may not sound like much until you compare it to the average total annual snowfall of 45" for our region.

The Department of Public Works has developed a Snow and Ice Control Policy that has proven to be economical and efficient. The crew is trained according to the policy and performs admirably. The Snow and Ice Control Policy can be found on our City of Menasha website.

At this time the December status ledgers have not been printed so I can only relay the equipment and material costs.

31105410124	Snow & Ice Control Service Account	
a) Usage	6,785.50 miles and/or hours	\$47,818.11
b) Replacement	947.25 hours	\$14,374.93
31105410125	Hauling Snow	
a) Usage	1,172.00 miles and/or hours	\$10,957.20
b) Replacement	233.50 hours	\$ 4,696.67
31105410202	Parking Lots	
a) Usage	792.75 miles and/or hours	\$ 6,123.24
b) Replacement	198.00 hours	<u>\$ 3,231.48</u>
Total December snow and ice related equipment		\$87,201.63

Material costs involve salt & brine usage

From 2000 to 2005 the average salt usage for December was 272.81 ton with 2005 peaking at 439.98 ton. December 2007 salt usage was 63% above the 5 year average (2000-2005) reaching 725.92 ton (this includes making brine) at \$39.95/ton is equal to \$29,000.51. Our salt usage is consistent with surrounding communities. In conversation with Joel Rasmussen the Winnebago County Highway Supervisor, he told me that the worst winter experienced when Winnebago County used 6,000 tons of salt. For December 2007 the Winnebago County Highway Department used 3,000 tons.

One tool the Department of Public Works has developed is the use of salt brine. During December 2007 we sprayed 29,967 gallons of salt brine on Menasha streets and parking lots. Depending on application rates the Code Blue routes will use 7,500 to 9,300 gallons per application. The brine is batched up in-house at a cost of roughly \$.07/gallon for a December cost of \$2,027.69.

To demonstrate the cost effectiveness of spraying our Code Blue routes with salt brine, here is a review of action taken. Friday, January 11, 2008 was forecast with a plowable snow event. Usually during the night as the storm starts a minimum of 3 salters are called out by the police department 3-4 hours minimum before our scheduled Code Blue crew comes in to plow them (usually 3:00am). On this particular event (January 10, 2008) the Department of Public Works sprayed the Code Blue routes at 60 gallons per mile. The storm started approximately 8:15pm Thursday and at 3:00am on Friday when the Code Blue crews came in, no salters were required or requested during the 6 hours between the start of the storm and when crews came in to plow.

The cost savings for this single event are:

1)	Minimum 2 hrs call time pay & 2 hrs minimum pay X 3	\$ 383.64
2)	Minimum 15 tons of salt @ \$39.95/ton	\$ 599.25
3)	35 miles per salter X 3 X \$5.00 per mile	\$ 525.00
4)	6 hours minimum replacement @ \$15.83/hour	\$ 94.98
		<u>\$1602.87</u>

As to questions of using overtime pay, we are very prudent. Our day starts at midnight and until our crews work eight (8) hours there is no overtime or overtime is limited. In the past our technology afforded us not to pay call time by scheduling overtime events, but the contract was changed to offset our progressive technical advancements.

There are numerous contribution factors when battling Mother Nature's winter fury. Enclosed is a copy of the Department of Transportations FAQ. One question "Why the difference in performance from storm to storm"? Even I was surprised to read that there are "reportedly more that 60,000 combinations of winter storms that can hit Wisconsin during the season".

My personal question is "what does every snow storm have in common"?

Answer: Traffic slows down to 10 mph over the speed limit! Our job is to save them from themselves!

FIVE YEAR SALT USAGE/AVERAGE

	2000	2001	2002	2003	2004	2005	5-YEAR TOTAL	5-YEAR AVERAGE	
JANUARY	329.31	144.3	247.84	311.21	452.4	430.28	1,915.34		383.07
FEBRUARY	214.62	178.85	155.66	357.29	174.82	384.71	1,465.95		292.99
MARCH	1.62	55.13	175.59	172.3	62.37	177.46	644.47		128.89
APRIL	0	0	8.26	101.5	0	0	109.76		21.95
MAY	0	0	0	0	0	0	0		
JUNE	0	0	0	0	0	0	0		
JULY	0	0	0	0	0	0	0		
AUGUST	0	0	0	0	0	0	0		
SEPTEMBER	0	0	0	0	0	0	0		
OCTOBER	0	0	0	0	0	0	0		
NOVEMBER	106.35	0	32.4	12.46	0	95.43	246.64		49.33
DECEMBER	421.38	121.01	40.66	151.57	189.45	439.98	1,364.05		272.81
TOTALS	1073.28	499.29	660.41	1106.33	879.04	1527.86	5,746.21		1149.04

FIVE YEAR SALT USAGE/AVERAGE

	2006	2007	2008	2009	2010	2011	5-YEAR TOTAL	5-YEAR AVERAGE
JANUARY	87.58	359.16					446.74	
FEBRUARY	282.98	239.57					522.55	
MARCH	85.33	267.05					352.38	
APRIL	0	76.15					76.15	
MAY	0	0					0	
JUNE	0	0					0	
JULY	0	0					0	
AUGUST	0	0					0	
SEPTEMBER	0	0					0	
OCTOBER	0	0					0	
NOVEMBER	0	79.77					79.77	
DECEMBER	156.07	725.92					881.99	
TOTALS	611.96	1747.62						

WINTER ANTI & DEICING MATERIAL INVENTORY DECEMBER 2007

ROAD SALT

DATE	TONS PURCHASED	TONS USED	TONS IN STORAGE	DATE	TONS PURCHASED	TONS USED	TONS IN STORAGE	STARTING BALANCE
1		60.18	1433.44	1			194.11	
2		33.19	1,373.26	2			194.11	
3		6.21	1,340.07	3			194.11	
4		22.10	1,333.86	4			194.11	
5		64.71	1,311.76	5			194.11	
6		31.80	1,247.05	6			194.11	
7		42.30	1,215.25	7			194.11	
8			1,172.95	8			194.11	
9			1,172.95	9			194.11	
10		2.20	1,170.75	10			194.11	
11		20.68	1,149.87	11			194.11	
12		4.40	1,145.47	12			194.11	
13		21.20	1,124.27	13			194.11	
14			1,124.27	14			194.11	
15		35.84	1,088.43	15			194.11	
16			1,088.43	16			194.11	
17			1,088.43	17			194.11	
18			1,088.43	18			194.11	
19			1,088.43	19			194.11	
20			1,088.43	20			194.11	
21			1,088.43	21			194.11	
22			1,088.43	22			194.11	
23		98.02	990.41	23			194.11	
24		65.51	924.90	24			194.11	
25			924.90	25			194.11	
26		1.85	923.05	26			194.11	
27		45.17	877.88	27			194.11	
28		95.49	782.39	28			194.11	
29		1.84	780.55	29			194.11	
30		36.37	744.18	30			194.11	
31		33.66	710.52	31			194.11	
TOTAL		722.92	710.52 22" accum	TOTAL			194.11	

CHIP MIX

CALCIUM CHLORIDE

TONS IN STORAGE	DATE	TONS PURCHASED	TONS USED	TONS IN STORAGE
194.11				STARTING BALANCE
194.11	1			0.00
194.11	2			0.00
194.11	3			0.00
194.11	4			0.00
194.11	5			0.00
194.11	6			0.00
194.11	7			0.00
194.11	8			0.00
194.11	9			0.00
194.11	10			0.00
194.11	11			0.00
194.11	12			0.00
194.11	13			0.00
194.11	14			0.00
194.11	15			0.00
194.11	16			0.00
194.11	17			0.00
194.11	18			0.00
194.11	19			0.00
194.11	20			0.00
194.11	21			0.00
194.11	22			0.00
194.11	23			0.00
194.11	24			0.00
194.11	25			0.00
194.11	26			0.00
194.11	27			0.00
194.11	28			0.00
194.11	29			0.00
194.11	30			0.00
194.11	31			0.00
194.11	TOTAL			0.00

SALT BRINE

DATE	TONS PURCHASED	TONS USED	TONS IN STORAGE
1			9,400.00
2		300.00	9,400.00
3		5,004.00	9,100.00
4	3,000.00	4,618.00	4,956.00
5	1,500.00	205.00	2,478.00
6	6,600.00	9,915.00	3,773.00
7		132.00	468.00
8			326.00
9			326.00
10			326.00
11			326.00
12	4,000.00		4,326.00
13	4,000.00		8,326.00
14			8,326.00
15			8,326.00
16			8,326.00
17			8,326.00
18			8,326.00
19			8,326.00
20			8,326.00
21			8,326.00
22			8,114.00
23		212.00	7,690.00
24		424.00	7,690.00
25			7,690.00
26			7,690.00
27		134.00	7,556.00
28		694.00	6,862.00
29		67.00	6,795.00
30	1,100.00		7,895.00
31	2,200.00	7,262.00	2,833.00
TOTAL	22,400.00	28,967.00	2,833.00

WISCONSIN DEPARTMENT OF TRANSPORTATION

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Frequently asked questions

Q. How many snowplows does the department own?

The department does not own any snowplows. Instead, the department contracts with the 72 county highway departments to plow and provide ice control on all state and US-numbered highways, and the Interstate system. The county highway departments have 729 snowplows that operate on the state highway system throughout the state.

Q. Why does the department contract with the county highway departments for maintenance on state maintained highways?

The system was set up over 85 years ago. Legislative audits have shown that this arrangement is not only cost effective but in the best interest of the citizens of Wisconsin and the users of our state highway system.

Q. Why do we salt the roadways in the winter?

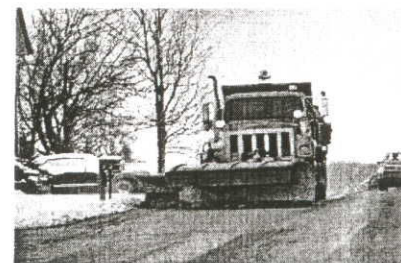
Salt is used to make the roadways safer during the winter. It lowers the freezing point of snow and ice and keeps the snow "workable" so it is more easily removed. Salt can be used for anti-icing, de-icing, or melting. Anti-icing is a technique where a chloride is applied to the roadway prior to a storm to prevent the snow/ice from bonding to the pavement. De-icing and melting is when a chloride is applied after the storm has begun in order to break up ice and snow pack or to melt glare/black ice.

Q. What are the limitations of road salt?

The minimum practical application range for salt is a pavement temperature of 15-20°F and above. While salt will melt snow and ice down to a pavement temperature of -6°F, it can melt over five times as much ice at 30°F as at 20°F. Thus the effectiveness of salt is sensitive to small differences in pavement temperature. Counties will attempt to apply only the amount required for temperature, time and use. Too little and the roadway will refreeze, too much is a waste of money and resources.

When the pavement temperature drops below 15°F the effectiveness of salt is decreased significantly. At these lower temperatures, the county highway departments will typically cease straight salt applications and begin adding other chemicals to the salt such as calcium chloride or magnesium chloride that will lower the freezing point even further.

Wind conditions must also be considered when deciding on whether to apply salt or other de-icing agents. As the temperatures drop and the snow becomes dryer, the wind can

**Related information:**[Safe winter driving tips](#)[Winter road condition report](#)

begin to blow the snow across the pavement. If there is a chemical residue left on the pavement from a previous salt application, blowing snow can be attracted to the residue and stick to the pavement creating hazardous conditions that would not have existed if no de-icing agents were previously applied. This is why counties are sometimes reluctant to apply salt or chemicals when the pavement temperatures are below 15°F. The effectiveness of salt can also be affected by the type of pavement. For example, salt works better on new asphaltic (blacktop) pavements than on tined concrete pavements.

The salt being used today typically includes other ice melting de-icing agents to increase its effectiveness at lower temperatures and to help it better adhere to the pavement. Adding other de-icing agents to the salt also reduces the number of applications needed. WisDOT is always looking for new ways to reduce the amount of chlorides needed to return the roadways to safe winter driving conditions. Sometimes counties use sand and other abrasives at lower temperatures to improve friction on the roadway. Abrasives have no ice melting properties and thus their use is limited.

Q. Why doesn't the department use more sand?

Our experience, and the body of research on the use of sand, indicate the benefits of abrasives (sand) applied to roadways are very minimal. Abrasives are easily displaced from the roadway by traffic and they have no ice melting properties. There are also negative environmental consequences such as air pollution and siltation of waterways.

Q. What is the importance of pavement and subsurface temperatures? Why can't you just use air temperatures?

The ability of deicing agent to melt snow and ice depends on the temperature of the roadway and not the air temperature. During the fall the pavement is often kept warmer than the surrounding air because of the warm soil. During the spring the reverse may be true. The pavement temperatures can be colder than the air because the soil is still frozen from the low winter temperatures. The sun also has a strong influence on the pavement temperatures. It can help heat the pavement and speed the melting process. Air and pavement temperatures can often differ by as much as 20 degrees Fahrenheit. For example, on a recent bitterly cold early winter day the air temperature was below 4°F and the pavement or surface temperature was 24°F, primarily because the subsurface temperature had not yet dropped below freezing.

Q. Am I allowed to pass a snowplow?

There are no state laws that prohibit you from passing a snowplow. However, it is illegal (State Statute 346.915) to follow a snowplow closer than 200 feet upon any highway having the posted speed limit of more than 35 mph if the snowplow is engaged in snow and ice removal. The majority of crashes involving snowplows and vehicles happen when a snowplow is rear ended or hit while being passed. Snowplows have wing plow blades that can extend anywhere between 2 and 10 feet beyond the width of the truck. This wing plow

blade is often not seen because of the snow cloud being kicked up by the snowplow. These wing plows can often weigh as much as a compact car.

Q. Who determines when the snowplows are called out?

Under department policy, county highway departments determine when and how to respond to a storm. The county patrol superintendent is typically responsible for calling out the crews.

Q. Why is it that I never seem to see a snowplow during a winter storm?

The department is responsible for snow removal on 11,612 centerline miles of roadway (or 31,429 lane miles) and 4,887 bridges. Using 729 trucks, the average time to complete a snow route is approximately 2½-3 hours, but some cycle times can be as long as four hours. Time is also needed to load and reload the truck with de-icing materials. The number of lane miles, if placed end to end, would circle the earth.

Q. Why does the department have its own weather reporting stations?

WisDOT has 61 specialized weather reporting stations that collect road surface information and atmospheric information that reflect conditions on the roadway. The systems measure air and pavement temperatures, relative humidity, wind speed and direction, subsurface temperatures, depth of precipitation on the roadway, and salt concentration. This information is used by weather forecasters to develop county specific forecasts. It is also used by county patrol superintendents to help determine the appropriate response to a storm.

Q. Why the difference in performance from storm to storm?

One of the biggest factors that determine county highway department performance is the type of storm and range of temperatures. There are reportedly more than 60,000 combinations of winter storms that can hit Wisconsin during the winter and each poses unique problems to snowplow operators. Storms with low temperatures can be difficult because deicing agents become less effective at the lower temperatures. Storms with high winds also are a challenge because the snow quickly blows back onto the roadway after the plows pass.

Q. Why are you spraying water on the roadway on a perfectly clear day?

We are actually spraying a liquid salt solution on the roadway that will help keep snow and ice from bonding to the pavement. Spraying a salt solution on the roadway is similar to spraying a frying pan with oil to keep food from sticking to the bottom of the pan. The salt solution acts as a barrier so that the snow and ice won't form a strong bond to the pavement. Studies show that under extremely cold conditions ice frozen

to concrete has a stronger bond than concrete alone. In many locations we also spray the salt solution on bridge decks the afternoon before a predicted frost. The early application of the salt solution helps prevent frost from forming on bridge decks throughout the night.

Q. What hours do the plows operate during a storm?

On higher volume roadways the plows usually operate 24 hours a day when the conditions warrant. There are times, however when hours need to be reduced to give operators the opportunity to rest. On lower volume highways, roadways are usually plowed between 4 AM and 10 PM, when conditions warrant. If weather conditions are so severe that we are making no progress or it is unsafe for them to operate, trucks may be pulled off the road until conditions improve.

Q. Who is responsible for the winter road condition report that I see on the Internet? Where else can I get road condition information?

The Wisconsin State Patrol is responsible for providing the winter road condition reports.

WisDOT offers traveler information, including road conditions and weather forecasts on the Internet and by telephone. Access the Web page at:

<http://www.dot.wisconsin.gov/travel/road/winter-roads.htm> or call 800-ROADWIS (762-3947).

Access the following Web page for winter roadway conditions in other states:

<http://www.fhwa.dot.gov/trafficinfo/index.htm>.

Q. What's the typical size of trucks in the department's fleet?

The county highway department's have two basic categories of trucks used in winter operations. A typical tandem tri-axle truck has a capacity of 15 tons and the single axle truck has a capacity of 5 tons. Trucks are usually kept for about 15-20 years and then sold at auction.

Q. Who is responsible for plowing snow on a state highway in a city or town?

It could be WisDOT or the city. In many communities, agreements between WisDOT and the city give the city full maintenance responsibility, including the removal of snow and ice, on state highways passing through those communities. These agreements can help reduce costs to WisDOT and provide for better continuity of service.



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Questions about the content of this page:
Michael Sproul, michael.sproul@dot.state.wi.us
Last modified: December 2, 2005



January 16, 2008

Board of Public Works
City of Menasha
Menasha, WI 54952

RE: Recommendation to Reconstruct First Street from Manitowoc Street to Ice Street

Members of the Board:

The 2008 Budget (Account # 000-54121-822, see attached) includes First Street from Manitowoc Street to Ice Street as a street to be pulverized and resurfaced by Department of Public Works crews. During our preliminary field work for this project, we discovered the street condition is somewhat marginal for a resurfacing type improvement due to some poor sections of curb and gutter, and indications of insufficient base strength, given the type of surface cracking occurring.

Because of this concern, we dug some test holes along First Street to determine the amount and condition of base material. We found the condition of the material to be mostly satisfactory, but the amount (thickness) of material is insufficient to adequately support an overlay that should provide 12-15 years of service.

The 2008 Budget identifies First Street from DePere Street to Manitowoc Street as a reconstruction project due to previous overlays, pavement deterioration and curb condition. It is my recommendation that the reconstruction project be extended to include that segment of First Street from Manitowoc Street to Ice Street for the reasons expressed above. The estimated cost for the added work is \$105,000.

In order to accommodate this revision, I recommend delaying the reconstruction of Appleton Street from First Street to Appleton Street until a future budget year. The combination of eliminating Appleton Street (\$75,000) and including budgeted funds for First Street from Manitowoc to Ice (\$37,000) will cover the additional estimated cost of \$105,000. If there are sufficient remaining funds, the DPW crews could pulverize and resurface the block of Appleton Street from Broad Street to First Street which is in need of such per our street condition rating report.

Plans for the reconstruction project will be presented at an upcoming Board of Public Works meeting.

Sincerely,

Mark Radtke, P.E.
Director of Public Works

Attachment

M:\word\BPW report re 1st St reconst 1-16-08.doc

CITY OF MENASHA

2008 BUDGET DETAIL - CAPITAL

BUDGET NAME		PREPARED BY	
Repl of Streets/Alleys		Mark Radtke	
BUDGET NUMBER	DATE	DEPT HEAD REQUEST	MAYOR RECOMMEND
000-54121-000	10/10/2007		
<u>CAPITAL (DETAIL EACH REQUEST (SUB ACCOUNT # 991)</u>			
NEW STREET CONSTRUCTION			
Northridge Manor II (Final asphalt pavement/concrete curb and gutter)* \$170,000		0.00	0.00
Lake Park Heights (Final asphalt pavement/concrete curb and gutter) *\$337,000		0.00	0.00
Morgan Taylor Court (Final asphalt pavement/concrete curb and gutter)* \$34,500		0.00	0.00
*Recommend use of borrowed funds		\$0.00	\$0.00
TOTAL			
STREET RECONSTRUCTION/REHABILITATION			
Third Street, Tayco Street to Manitowoc Street (WisDOT) - Set aside funds for street enhancements including colored crosswalks/terraces and island landscaping		118500.00	0.00
Pacific Street, Eighth Street to Ninth Street; pulverize and asphalt resurface by DPW (materials cost only)		22000.00	22000.00
Chute Street, Lush Street to Tayco Street; pulverize and asphalt resurface by DPW (materials cost only)		26000.00	26000.00
Eighth Street, Tayco St. to Pacific St.; pulverize and asphalt resurface by DPW (materials cost only)		27000.00	27000.00
Fourth Street, Konemac St. to East End; pulverize and asphalt resurface by DPW (materials cost only)		29000.00	29000.00
Konemac Street, Third St. to Plank Rd.; pulverize and asphalt resurface by DPW (materials cost only)		27000.00	27000.00
Green Bay Street, Broad St. to Third St.; pulverize and asphalt resurface by DPW (materials cost only)		30000.00	30000.00
First Street, Manitowoc St. to Ice St.; pulverize and asphalt resurface by DPW (materials cost only)		37000.00	37000.00
First Street, Depere St. to Manitowoc St.; total reconstruction		90000.00	90000.00
Appleton Street, First St. to Third St.; total reconstruction		75000.00	75000.00
TOTAL		\$481,500.00	\$363,000.00
TOTAL CAPITAL & REQUEST/RECOMMEND		\$481,500.00	\$363,000.00

